Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SPECTRUM OF DAVIDSON'S COMET.

The spectrum of Davidson's comet was observed here with the twelve-inch equatorial, on July 31st, and with the thirty-six-inch equatorial, on August 1st. The *coma* showed a spectrum consisting of three somewhat diffuse bright bands, which were found to be identical in position with the carbon fluting given by the blue flame of a spirit lamp. A faint luminosity connected the bands, so that the spaces between them were not perfectly dark.

The nucleus gave a continuous spectrum not extending below the D line, with slight brightenings at the positions of the carbon flutings. Such a spectrum would probably be given by the material of the *coma* at an increased pressure. Although the comet is now rated at about the sixth magnitude, its spectrum is much fainter than that of a star of this brightness, on account of the diffusion of its light over a large area. J. E. K.

Aug. 2, 1889.

NEW DOUBLE STARS.

One of the more recent double-star discoveries with the thirty-six-inch telescope is a seventh-magnitude star (D. M. 30°, 4809) near η Pegasi. The measures on three nights give:

1889.55 335°.3 0″.23 7.2 8.2

The 4-5 m. star, ψ *Cassiopeæ*, has been known since the first HERSCHEL as a triple star, from a small double companion at a distance of 28″ from the large star. The Lick telescope shows a small star of about 13-5 m. at a distance of 3″.2 in the direction of 41°.2.

A careful set of measures of the close pair, κ *Pegasi* (β 989) has been made with the thirty-six-inch telescope. The change in both angle and distance has been very great since its discovery with the Chicago telescope in 1880. As the distance now is only 0″.14, it could hardly be seen, or measured, with any instrument much smaller than the Lick telescope. The components differ by only about half a magnitude, and there is a possibility of the wrong quadrant having been given in my first measures made in 1880, although at the time this was carefully looked after. Taking the early measures as they stand, the motion (direct) would be 235° in nine years. If the first angle should be reversed, the change would be only 56°.

There is a small star 11″ distant, which makes the double, Σ 2824. This is fixed with reference to the bright star.

28 *Andromedæ* is also a new double star. The following is the mean of three nights' measures with the thirty-six-inch refractor:

1889.51 360°. 1 2″. 42 5.5 13.3

Herschel, at the Cape of Good Hope, noted a small double star in the fine cluster and nebula, Messier 8, and entered it as No. 5009 of the Cape Catalogue. The Lick telescope shows that the principal star of Herschel's pair is a close pair. The mean of four measures is:—

1889.40 55°. 6 0″. 63 8.7 9.5

There is probably no change in Herschel's more distant star.

	°	″			
1837.70	20.8	2.	10.	12.	1n H
1880.58	19.9	3.86	9.0	9.5	1n Cin
1889.40	23.3	4.05	8.7	9.6	4n β

For many years Σ 2438 has been found to be single with all telescopes. A recent set of measures with the large refractor of the Lick Observatory gives for the distance 0″. 24, and the position angle 46°. 2. The angle when measured by Struve in 1832 was 340°. 6.

With powers up to 2000, the thirty-six-inch shows the large star of Σ 3130 as single. It has not been seen double during the last thirty years. S. W. B.

MERIDIAN CIRCLE OBSERVATIONS OF *VICTORIA* AND COMPARISON STARS.

In connection with astronomers in the northern hemisphere, the Astronomer Royal at the Cape of Good Hope, Dr. David Gill, is observing the planet *Victoria*, for the determination of its parallax (and hence of the Solar Parallax). He has requested various observatories to determine, by meridian observations, the positions of the planet and of thirty-seven comparison stars. This work has been done at the Lick Observatory by eighteen nights of observations, between June 8 and July 8, and the results will soon be ready for publication. From a series of experiments, it was found that (thanks to the designer of the large pivots, nearly four inches in diameter) much better results could be obtained when the observations were made without clamping the instrument. The clamp was accordingly removed (some months ago), so that all of the observations referred to above were made with the nearly counterpoised instrument hanging freely in the wyes. That this variation from the usual method is to be approved, when the proper precautions are taken, seems to be shown by the smallness of the probable errors of observation, which,